

### IN THE CLAIMS

Please amend the claims as follows:

Claims 1-24 (Canceled).

Claim 25 (New): A method of reducing a fluctuation in a cut-off voltage of a cathode for an electron tube in which a metal layer for protrusively deforming a cathode substrate when heated is formed on a surface of said cathode substrate, and an electron emissive material layer is formed on a front face of said cathode substrate directly or through said metal layer and heating means for heating said electron emissive material layer to emit a thermion from a front face of said electron emissive material layer is provided,

wherein when said front face of said electron emissive material layer is consumed and retreats, said protrusive deformation of said cathode substrate by said metal layer is induced by a heating operation of said heating means so that said front face of said electron emissive material layer is correspondingly deformed protrusively, and

wherein said metal layer is formed on concavo-convex portions provided on said surface of said cathode substrate.

Claim 26 (New): The method of reducing a fluctuation in a cut-off voltage according to claim 25, wherein said metal layer is divided into a plurality of parts that are dispersively formed on said surface of said cathode substrate.

Claim 27 (New): A method of reducing a fluctuation in a cut-off voltage of a cathode for an electron tube in which a metal layer for protrusively deforming a cathode substrate when heated is formed on a surface of said cathode substrate, and an electron emissive material layer is formed on a front face of said cathode substrate directly or through said

metal layer and heating means for heating said electron emissive material layer to emit a thermion from a front face of said electron emissive material layer is provided,

wherein when said front face of said electron emissive material layer is consumed and retreats, said protrusive deformation of said cathode substrate by said metal layer is induced by a heating operation of said heating means so that said front face of said electron emissive material layer is correspondingly deformed protrusively, and

wherein said metal layer is formed on concavo-convex portions provided on said front face of said cathode substrate and is alloyed with a metal contained in said cathode substrate by a heating operation of said heating means and is thus expanded, thereby protrusively deforming said front face of said cathode substrate.

Claim 28 (New): The method of reducing a fluctuation in a cut-off voltage according to claim 27, wherein said metal layer is divided into a plurality of parts that are dispersively formed on said surface of said cathode substrate.

Claim 29 (New): A cathode for an electron tube comprising:

a cathode substrate;

a metal layer formed on a surface of said cathode substrate and heated to protrusively deform said cathode substrate;

an electron emissive material layer formed on a front face of said cathode substrate directly or through said metal layer; and

means for heating said electron emissive material layer to emit a thermion from a front face of said electron emissive material layer,

wherein when said front face of said electron emissive material layer is consumed and retreats, said protrusive deformation of said cathode substrate by said metal layer is induced

by a heating operation of said means for heating so that said front face of said electron emissive material layer is correspondingly deformed protrusively, and

wherein said metal layer is formed on concavo-convex portions provided on said surface of said cathode substrate.

Claim 30 (New): The cathode for an electron tube according to claim 29, wherein said metal layer is divided into a plurality of parts that are dispersively formed on said surface of said cathode substrate.

Claim 31 (New): A cathode for an electron tube comprising:

a cathode substrate;

a metal layer formed on a surface of said cathode substrate and heated to protrusively deform said cathode substrate;

an electron emissive material layer formed on a front face of said cathode substrate directly or through said metal layer; and

means for heating said electron emissive material layer to emit a thermion from a front face of said electron emissive material layer,

wherein when said front face of said electron emissive material layer is consumed and retreats, said protrusive deformation of said cathode substrate by said metal layer is induced by a heating operation of said means for heating so that said front face of said electron emissive material layer is correspondingly deformed protrusively, and

wherein said metal layer is formed on concavo-convex portions provided on said front face of said cathode substrate and is alloyed with a metal contained in said cathode substrate by a heating operation of said means for heating and is thus expanded, thereby protrusively deforming said front face of said cathode substrate.

Claim 32 (New): The cathode for an electron tube according to claim 31, wherein said metal layer is divided into a plurality of parts that are dispersively formed on said surface of said cathode substrate.